

**In the Claims:**

Please amend and cancel the claims as indicated in the separate sheets attached below and entitled "Claim Amendments Filed 06/28/05 with Response to Office Action mailed by Examiner on 12/28/04 in Patent Application No. 10/619,376".

**REMARKS**

The Examiner is thanked for extending the courtesy of the in-person interview on April 28, 2005.

Claims 27, 46 and 47 are amended to improve the readability and form thereof, such as by incorporating language that provides a more readily ascertained similarity to language used in other claims or that makes certain features more readily apparent, and not for reasons of patentability, as Applicants consider that the claims as originally filed recite patentable subject matter. New claims 50-67 are added.

Claims 33-45 are cancelled in light of the withdrawal from consideration of claims 33-45 by the Examiner. The cancellation is without prejudice. For example, Applicants reserve all rights to pursue the subject matter of claims 33-45 in a divisional application.

Now in the case are claims 1-32 and claims 46-67, of which claims 1, 27, 28, 30, 46, 47 and 67 are independent.

**Independent Claims 1, 27-28, 30 and 46-47**

Each of independent claims 1, 27-28, 30 and 46-47 recites the term "birefringence" or "birefringent". As noted by the Examiner on page 4 of the outstanding Office Action, the abstract of Mazzarese states that there is "no effect on polarization". More specifically, Mazzarese states "the difference between the refractive index of the cladding member and that of the stress field portion ... is within such a range that the

stress field portion does not affect the polarization properties of the light traveling in the core member" (Mazzarese, Abstract).

As noted in the interview of April 28, 2005, "birefringence" refers to the condition wherein the polarization properties are affected, and hence Mazzarese fails to teach or suggest the invention as recited in the foregoing independent claims. More specifically, birefringence refers to the condition wherein the refractive index differs for polarizations of light, which can result in the polarizations traveling at different speeds. See, for example, Jeff Hecht, Understanding Fiber Optics, Second Edition, Page 73. Copies of the cover page and of page 73 of the foregoing reference accompany this Response and Amendment. See also paragraph 148 of the Applicants published application (US 2004/0086245), noting that birefringence is a measure of the extent of the de-coupling of the horizontal and vertical polarizations, as the stress in the core causes the core to have a slightly different index of refraction for each of the polarizations, such that the wavelengths and/or phase velocities of the light waves of each of the polarizations are different, and light of one polarization does not as readily couple into the other polarization due to imperfections in the fiber, or bends, or the like.

In teaching that the polarization properties of light are not to be affected, Mazzarese teaches away from the present invention and fails to teach or suggest the foregoing independent claims. See, for example, paragraph 152 of the present application.

Accordingly, reconsideration and withdrawal of the rejections of independent claims 1, 27-28, 30 and 46-47, and of the remaining original claims, which are dependent, directly or indirectly, therefrom is respectfully requested.

Applicants disagree with the Examiner that Mazzarese teaches or suggests other limitations recited in the pending claims. In light of the above-noted defect of Mazzarese, further discussion of additional defects of Mazzarese is not necessary at this time. However, Applicants make no admission regarding the teachings or suggestions of

Mazzarese, and reserve the right to demonstrate, in this or another forum, that Mazzarese fails to teach or suggest claim limitations not specifically addressed in the Response and Amendment.

New Claims 50-67

New claims 50-67 are added. New claims 50-58 are dependent, directly or indirectly, from original claim 47; new claims 59-66 are dependent, directly or indirectly, from claim 48; and new claim 67 is independent.

No new matter is added. Support is found for the new claims throughout the specification, including the claims as originally filed. Regarding claims 50-51 and 59, see, for example, at least paragraph 117 of Applicants' published application; regarding claims 52-53 and 60-61, see, for example, at least paragraphs 101 and 137 of Applicants' published application; regarding claims 54-56 and 62-64, see, for example, at least paragraphs 69, 79, 109, 111 and 135 of Applicants published application; regarding claims 57-58 and 65-66, see, for example, at least paragraphs 120 and 137-138 of Applicants' published application.

Claim 67 is directed to a polarization maintaining double clad fiber, and recites certain limitations found in the original claims deemed to be allowable over Mazzarese in the outstanding Office Action. No new matter is added. See, for example, FIGURES 1 and 13 and the discussion accompanying these FIGURES, as well as paragraphs 101, 117 and 137 of Applicants' published application. It is respectfully submitted that Mazzarese does not teach or suggest the invention as recited new claim 67.

Objection to Claims 14, 15, 20-22 and 25

Claims 14, 15, 20-22 and 25 are objected to as being dependent on a rejected base claim, but are otherwise considered allowable by the Examiner in the outstanding Office Action. It is noted with appreciation the Examiner considers that original claims 14, 15,

20-22 and 25 to recite allowable subject matter. However, because for the reasons noted above, Applicants consider that Mazzarese fails to teach or suggest the subject matter of claim 1 (from which claims 14, 15, 20-22 and 25 depend), Applicants respectfully submit that original claims 14, 15, 20-22 and 25 are allowable without amendment. Reconsideration and withdrawal of the objection to claims 14, 15, 20-22 and 25 is respectfully requested.

#### 35 USC §112 Rejection

Claim 49 is rejected under 35 USC §112 as indefinite. Claim 49, dependent on claim 47, recites that the outer perimeter the second cladding is shaped as an octagon. Claim 47, as now amended, recites that stress inducing regions can cause sufficient scattering of pump light received by said first cladding such that the absorption of pump light per unit length of said fiber is within 15 percent of the absorption per unit length *when* said second cladding has an outer perimeter shaped as an octagon. Claim 47 is silent as to the shape of the outer perimeter of the second cladding, but uses the example of the perimeter being shaped as an octagon for purposes of quantifying the scattering caused by the stress inducing regions in terms of absorption per unit length of the fiber. It is respectfully submitted that such quantification is clear to one of ordinary skill in the art. Reconsideration and withdrawal of the rejection is respectfully requested.

#### Information Disclosure Statement

The Examiner states in paragraph 12 of the outstanding Office Action that the Carter et al documents filed on 6/23/03 and 10/7/03 are not available to the Examiner, and that the Tankala et al amendment was considered, but not is not in a proper format to be made of record. Complete copies of all of the foregoing were filed with the IDS submitted 10/15/03, as evidenced by Applicants' return receipt postcard. Applicants can resubmit the foregoing upon request, and also request additional information regarding any improper format of the Tankala et al amendment if resubmission is requested. However, it is noted that all of the foregoing are now available on public PAIR. The

Tankala et al amendment is now part of the file for US Patent No. 6,779,364; the Carter amendment filed 6/23/2003 is part of the file for US Patent No. 6,687,445; and the Carter patent application filed on 10/07/2003 is now U.S. Patent Application Publication No. 2004/0069019.

Request for Three Month Extension of Time

Applicants hereby request a Three Month Extension of Time for response to the outstanding Office Action mailed December 28, 2004, thereby extending the time for response to June 28, 2005. Authorization is hereby granted to charge the Small Entity fee of \$510 for the requested Three Month Extension of Time to Nufern Deposit Order Account Number 50-2343.

Fees for Additional Claims

New claims 50-67 are added, of which 17 claims (claims 50-66) are dependent and one claim (claim 67) is independent. Authorization is hereby granted to charge Small Entity additional claim fees of \$525 to Nufern Deposit Order Account No. 50-2343.

**CONCLUSION**

This Response and Amendment attends to all issues raised in the outstanding Office Action. Reconsideration and withdrawal of the rejections and objections raised in the outstanding Office Action are respectfully requested, as is early allowance and passage to issue. No fees other than the fees associated with the Request for a Three Month Extension of Time and the Additional Claim Fees are considered to be due in conjunction with the submission of this Response and Amendment. However, if it is determined that an additional fee is due or that Applicants are underpaying or overpaying a fee, further authorization is hereby granted to debit or credit, as appropriate, Nufern Deposit Order Account 50-2343.

Please do not hesitate to contact the undersigned if any issues are deemed to remain unresolved.

Respectfully submitted,



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